

At 5.5 years, initial SNM therapy was less costly (\$23,504 vs. \$27,720) and more effective than initial BTX (4.08 vs. 4.04 QALYs). Probabilistic sensitivity analyses that varied SNM and BTX success and repeat BTX injection probabilities and utilities, confirmed these results. Repeat injections and differences in AEs were responsible for most of the changing costs over time. **CONCLUSIONS:** Based on a more clinically comprehensive design and set of inputs than previous models, treatment with SNM may be more cost-effective than BTX, especially over longer periods of time.

#### PUK15

##### THE COST-EFFECTIVENESS OF LANTHANUM CARBONATE IN THE TREATMENT OF HYPERPHOSPHATEMIA IN DIALYSIS PATIENTS FROM A CANADIAN PERSPECTIVE

Vegter S<sup>1</sup>, Tolley K<sup>2</sup>, Levin A<sup>3</sup>, Lok CE<sup>4</sup>, Morton AR<sup>5</sup>, Soroka SD<sup>6</sup>, Keith MS<sup>7</sup>, Postma MJ<sup>1</sup>  
<sup>1</sup>University of Groningen, Groningen, The Netherlands, <sup>2</sup>Tolley Health Economics, Buxton, UK, <sup>3</sup>St Paul's Hospital, Vancouver, BC, Canada, <sup>4</sup>University of Toronto, Toronto, ON, Canada, <sup>5</sup>Queen's University, Kingston General Hospital, Kingston, ON, Canada, <sup>6</sup>Dalhousie University, Queen Elizabeth II Health Sciences Centre, Halifax, NS, Canada, <sup>7</sup>Shire Pharmaceuticals, Wayne, PA, USA

**OBJECTIVES:** Hyperphosphatemia leads to increased hospitalizations and mortality in End-Stage Renal Disease (ESRD). First-line therapy in Canada consists primarily of calcium carbonate (CC). We determined the incremental cost-effectiveness ratio (ICER) of the non-calcium phosphate binder lanthanum carbonate (LC) as second-line therapy, from a Canadian healthcare perspective. **METHODS:** A Markov model was developed to determine the cost-effectiveness of second-line LC after therapy failure on CC, compared with continued CC treatment; or alternatively with second-line Sevelamer (SH). Patient-level data (n=380) from a prospective randomized trial were used for LC and CC drug efficacy. For SH efficacy, an indirect comparison of eight clinical trials was used to calculate a dose-relativity between SH and LC of 2.7:1. Costs, quality of life, mortality and hospitalization rates were based on Canadian data. Univariate and probabilistic sensitivity analyses were performed. **RESULTS:** Modelling 1,000 dialysis patients, 378 (37.8%) did not achieve target serum phosphate (SP) levels ( $\leq 1.78$  mmol/L) with first-line CC therapy and were eligible for LC. Of these, 168 (44.4%) responded to LC therapy, resulting in 49 life years and 29 Quality-adjusted life years (QALYs) gained. The ICER of second-line LC treatment compared with continued CC treatment was CAN\$13,200 (\$4,600–\$22,800) per QALY gained. Results were robust to plausible variations in model parameters. One-year drug costs per additional responder to second-line LC therapy were \$2,600, compared to \$4,300 for first-line LC. The model evaluating second-line use of LC vs second-line use of SH estimated that LC had similar efficacy but was 16% less expensive than SH. **CONCLUSIONS:** Second-line treatment with LC is cost-effective compared to continued therapy with CC; and is less expensive compared to first-line LC. LC had lower costs compared with SH, due to lower dose requirements for similar efficacy. These results reinforce current treatment guidelines to treat patients not achieving target SP levels on CC with second-line LC.

#### PUK16

##### COST-EFFECTIVENESS OF VALGANCICLOVIR 200 DAYS PROPHYLAXIS VERSUS 100 DAYS PROPHYLAXIS IN KIDNEY TRANSPLANT PATIENTS AT HIGH-RISK FOR DEVELOPING CYTOMEGALOVIRUS DISEASE

Vicente C<sup>1</sup>, Humar A<sup>2</sup>, Lemieux C<sup>3</sup>, Zilbershtein R<sup>1</sup>, Douglas P<sup>4</sup>, Formica L<sup>4</sup>, Piwko C<sup>1</sup>  
<sup>1</sup>PVINA Consulting Inc., Thornhill, ON, Canada, <sup>2</sup>University of Alberta, Edmonton, ON, Canada, <sup>3</sup>Centre Hospitalier de l'Université de Montréal, Montréal, QC, Canada, <sup>4</sup>Hoffmann-La Roche Limited, Mississauga, ON, Canada

**OBJECTIVES:** Cytomegalovirus (CMV) disease can severely impact patient outcomes and costs associated with kidney transplant. The IMPACT study has shown that kidney transplant patients significantly benefit from extending valganciclovir prophylaxis from 100 to 200 days. The objective of this study was to determine the cost-effectiveness of valganciclovir 200 day prophylaxis compared to 100 days in kidney transplant patients at high-risk for developing CMV disease. **METHODS:** A Markov model was developed to capture time spent by patients in various health states, which included: CMV, No-CMV, Acute Rejection, Graft Failure, Dialysis and Death. Results were reported as incremental cost per additional quality adjusted life-years (QALY) gained, over a 10-year period. Transition probabilities for the first year were derived from the IMPACT study. Data beyond the first year were derived from the published literature and baseline mortality rate was determined from the Canadian Organ Replacement Register. The base case analysis focused on direct medical costs only from the perspective of the Ministry of Health (MoH). A second analysis was conducted from the societal perspective. Cost data were obtained from a variety of sources and reported as 2010 Canadian Dollars. A 5% discount rate was applied to both costs and patient outcomes. Multiple sensitivity analyses were undertaken to test the robustness of the model. **RESULTS:** From the MoH perspective valganciclovir 200 days prophylaxis is cost-effective when compared to 100 days with an incremental cost-utility ratio (ICUR) of \$34,818 per additional QALY gained. The cost-effectiveness is improved from the societal perspective, with an ICUR of \$32,571 per additional QALY gained. Results were robust over a wide range of sensitivity analyses tested. **CONCLUSIONS:** Valganciclovir 200 days is a cost-effective prophylaxis strategy in kidney transplant patients at high-risk of developing CMV when compared to valganciclovir 100 days.

#### PUK17

##### UTILIZATION AND ECONOMIC IMPACT OF IV IRON AND ERYTHROPOIESIS STIMULATING AGENTS IN CHRONIC KIDNEY DISEASE PATIENTS: A MULTI-HOSPITAL STUDY

Joshi AD, Holdford D, Brophy D, Harpe SE  
 Virginia Commonwealth University, Richmond, VA, USA

**OBJECTIVES:** The rate and extent of utilization of IV iron in anemic CKD patients was quantified. Predictors of IV iron and ESA use were determined. The impact of IV iron and ESA use was examined separately for total hospital costs and length of stay (LOS). **METHODS:** This is a retrospective cohort analysis within the UHC data warehouse in the period of January 1, 2006, to December 31, 2008. Inclusion criteria were age > 18 years with a primary/secondary diagnosis of CKD. The exposure of interest was IV iron and ESA therapy, and the outcome was the difference in total hospital costs and length of stay. A binomial logistic regression using the GEE methodology was used to identify predictors of IV iron utilization. Propensity scores were used to control for confounding. A GEE model using gamma distribution and log link was used to determine the adjusted hospital cost and length of stay for the IV iron and ESA and ESA alone therapy groups. **RESULTS:** 82,947 patients met the study criteria. Of the 82,947 CKD patients on ESA therapy, only 8% (n = 6678) patients were on IV iron supplementation. Age, race, primary payer, admission status, severity of illness, dialysis status and physician specialty were identified as strong predictors of IV iron use. For patients using both IV iron and ESA (n=6678), mean costs were \$34,756 compared to \$31,404 for ESA users alone (n=76,269). The overall mean LOS for all patients was 9.75 days. For those using IV iron, the LOS was 10.71 days, and for those only using ESA, the LOS was 9.66 days. **CONCLUSIONS:** Our investigation showed significant reduction in ESA doses with the use of IV iron supplementation, however, the overall prevalence of IV iron usage was low. Intravenous iron users were associated with a higher total hospital cost and longer length of stay than ESA users.

#### Urinary/Kidney Disorders – Patient-Reported Outcomes & Preference-Based Studies

#### PUK18

##### THE IMPACT OF AUTOSOMAL DOMINANT POLYCYSTIC KIDNEY DISEASE (ADPKD) ON PATIENTS' HEALTH RELATED QUALITY OF LIFE (HRQOL): DEVELOPMENT OF A CONCEPTUAL FRAMEWORK

Cole JC<sup>1</sup>, Krasa HB<sup>2</sup>, Cheng R<sup>1</sup>, Oberdhan D<sup>2</sup>, Urwongse J<sup>3</sup>, Schaefer C<sup>3</sup>, Czerwicz R<sup>2</sup>  
<sup>1</sup>Covance Market Access Services, Inc., San Diego, CA, USA, <sup>2</sup>Otsuka Pharmaceutical Development & Commercialization, Inc., Rockville, MD, USA, <sup>3</sup>Covance Market Access Services, Inc., Gaithersburg, MD, USA

**OBJECTIVES:** The aim of our study was to construct the conceptual framework of the impact of ADPKD on patients to support the use or development of a HRQoL instrument in ADPKD. **METHODS:** Based on concepts identified from the literature and ADPKD physicians/researchers from North America, Europe, and Japan, patients were asked how ADPKD impacts their physical and social functioning, emotions, and urinary symptoms according to a pre-defined moderator guide. Twenty focus groups (FGs) were conducted across 11 sites: three cities in North America (n=42), six cities in Europe (n=64), and two cities in Japan (n=11). FGs were moderated by native speakers and overseen onsite by a US-based scientist. A saturation table was developed to summarize concepts discussed in the FGs; saturation was achieved once no new concepts were identified. Concepts were identified based on themes mentioned by  $\geq 2$  participants within a FG. **RESULTS:** Concepts generated from the literature and ADPKD physicians/researchers discussions were endorsed by ADPKD patients. Agreement of concepts between genders across all countries was observed. Twenty-eight concepts were identified and categorized into: Physical Impact (impact on work/housework, limited functioning with mild/moderate exertion, self-care, diminish sex/intimacy, pain/discomfort in extremities/core, pain affecting work/housework, pain occurring with activity, modifications in lifestyle), Emotional Impact (fatigue, depression, anxiety, guilt of passing it to children, acceptance/self-education), Urinary Concerns (urgency, frequency, nocturia). Other concepts identified by patients include effect on diet, concern over body image, thirst, and disruption of social/leisure activities. Fifty-seven percent of these concepts were identified in the first FG; 100% saturation was achieved in the fifth FG. **CONCLUSIONS:** Identified concepts were universally applicable and their strength is evident by the achievement of complete saturation after 25% of the FGs. The completion of this conceptual framework using an iterative process provides a strong basis to develop an ADPKD-specific HRQoL instrument.

#### Urinary/Kidney Disorders – Health Care Use & Policy Studies

#### PUK19

##### KIT73: PRELIMINARY REPORTS OF IMMUNOSUPPRESSANT THERAPY PATTERNS IN A COHORT OF POST KIDNEY TRANSPLANT PATIENTS IN BRAZIL

Carvalho DDBM<sup>1</sup>, Garcia V<sup>2</sup>, Abbud-Filho M<sup>3</sup>, Nishikawa AM<sup>4</sup>, Asano E<sup>4</sup>, Nita ME<sup>4</sup>, Szabo SM<sup>5</sup>, Levy R<sup>5</sup>, Carvalho JF<sup>4</sup>, Donato BM<sup>6</sup>, Rahal E<sup>4</sup>, The KIT73 Study Group<sup>1-6</sup>  
<sup>1</sup>Hospital Geral Bonsucesso, Rio de Janeiro, Brazil, <sup>2</sup>Universidade Federal de Ciências da Saúde de Porto Alegre, UFCSA, Porto Alegre, Brazil, <sup>3</sup>Complexo Hospitalar Santa Casa de Porto Alegre, São José do Rio Preto, SP, Brazil, <sup>4</sup>Bristol-Myers Squibb S/A, São Paulo, SP, Brazil, <sup>5</sup>Oxford Outcomes Ltd., Vancouver, BC, Canada, <sup>6</sup>Bristol-Myers Squibb, Wallingford, CT, USA

**OBJECTIVES:** The aim of this study was to characterize Brazilian-specific immunosuppressant (IS) treatment patterns among kidney transplant patients. **METHODS:** Non-interventional, multicenter, medical chart review of patients undergoing kidney transplant. Five year follow-up data on IS medication use from adult ( $\geq 18$  years old at time of transplantation), single kidney only transplants from Jan/2004 to Jan/2005 were collected from 7 transplant center in Brazilian hospitals. Patients were censored on graft loss or loss of follow-up. **RESULTS:** Data on 498 patients were included; 51.2% were female, the average age was  $38.9 \pm 13.9$  years, and 55.4% were recipients of kidneys from deceased donors. Of the 498 patients, 61.2% were treated with tacrolimus (TAC)-based IS regimens as the initial calcineurin inhibitor (CNI), while 38.8% were treated with cyclosporine (CyC). CNI switching from TAC to CyC occurred in 4.6%, versus 5.6% that switched from CyC to TAC. There was a